CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.05/MBH/CEMENT/2013-14

Date: 11.03.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. M.B. Hombal,** Contractor, Bangalore.
NAME OF THE WORK	:	Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
REFERENCE	:	AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014
SAMPLE ID	:	Cement
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	480 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	26.00 %	-

Civil-Tech Consultants & Engineers Bangalore

Note:

⇒ The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

AE-01

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.05/MBH/SAND/2013-14 : 11.03.2014

CIVIL ENGINEERING TESTING LABORATORY www.civiltechconsultants.com

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Mr. M.B. Hombal,** Contractor, Bangalore.

Name of Work : Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014

Date of Testing : 11.03.2014

Material : Sand Total Wt. of Aggregates in gms 2000

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	96	4.80	4.80	95.2	90-100
2.36	205	10.25	15.05	85.0	75-100
1.18	488	24.40	39.45	60.6	55-90
600 Micron	425	21.25	60.70	39.3	35-59
300 Micron	493	24.65	85.35	14.7	8-30
150 Micron	218	10.90	96.25	3.8	0-10

Civil-Tech Consultants & Engineers Bangalore

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

AE-01
ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.05/MBH/AGG/2013-14 : 11.03.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Mr. M.B. Hombal,** Contractor, Bangalore.

Name of Work : Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014

Date of Testing : 11.03.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms 25000

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	995	3.98	3.98	96.02	95-100
20	15840	63.36	67.34	32.66	30-70
10	5098	20.39	87.73	12.27	10-35
4.75	2545	10.18	97.91	2.09	0-5

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing

AE-05
ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

4

Job No.: CTCE/BBMP/W.No.05/MBH/STEEL/2013-14 11.03.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. M.B. Hombal,** Contractor, Bangalore.
Name of the Work	:	Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	:	AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014
Date of Test	:	11.03.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	514	545	12.90	O.K	O.K

Note:

⇒ The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 15 days from the date of testing.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

5

Job No.: CTCE/BBMP/W.No.05/MBH/CUBE/2013-14 19.04.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. M.B. Hombal,** Contractor, Bangalore.
Name of the work	: Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	: AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014
Sample ID	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.03.2014	19.04.2014	8.145	478.3	21.26
2	22.03.2014	19.04.2014	8.256	492.5	21.89
3	22.03.2014	19.04.2014	8.388	512.4	22.77

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.05/MBH/CUBE/2013-14

21.04.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. M.B. Hombal,** Contractor, Bangalore.
Name of the work	: Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	: AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014
Sample ID	: RCC Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	24.03.2014	21.04.2014	8.267	493.8	21.95
2	24.03.2014	21.04.2014	8.342	507.2	22.54
3	24.03.2014	21.04.2014	8.456	516.9	22.97

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.05/MBH/CUBE/2013-14 23.04.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. M.B. Hombal,** Contractor, Bangalore.
Name of the work	: Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	: AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014
Sample ID	: RCC Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	26.03.2014	23.04.2014	8.267	493.7	21.94
2	26.03.2014	23.04.2014	8.157	485.2	21.56
3	26.03.2014	23.04.2014	8.362	510.9	22.71

Civil-Tech Consultants & Engineers Bangalore

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.05/MBH/CUBE/2013-14 24.04.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. M.B. Hombal,** Contractor, Bangalore.
Name of the work	: Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	: AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014
Sample ID	: RCC Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.03.2014	24.04.2014	8.347	518.7	23.05
2	27.03.2014	24.04.2014	8.169	494.8	21.99
3	27.03.2014	24.04.2014	8.285	506.3	22.50

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.05/MBH/CUBE/2013-14

26.04.2014

TEST REPORT ON CONCRETE CUBES

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Mr. M.B. Hombal,** Contractor, Bangalore.

Name of the work : Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014

Sample ID : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	29.03.2014	26.04.2014	8.296	479.3	21.30
2	29.03.2014	26.04.2014	8.357	486.9	21.64
3	29.03.2014	26.04.2014	8.482	502.7	22.34

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.05/MBH/CORE/2013-14

02.04.2014

TEST REPORT ON CONCRETE CORE (PRECAST SLAB)

Name of Client	:	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Name of Agency	:	**Mr. M.B. Hombal,** Contractor, Bangalore.
Name of work	:	Providing RCC Drain and covering slabs at Agarhara Layout in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Referece	:	AEE/BTP/(WO)/284/2013-14Dated: 08.03.2014
No.of Sample Tested	:	03
Date of Testing	:	02.04.2014
Techinical Reference	:	IS:516-1959 (Reaffirmed 1999), SP-24:1983.
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	82.00	0.406	2521.64	1.64	0.965	32.85	16.73	18.07	17.44	21.80
2	50.00	83.00	0.413	2534.21	1.66	0.965	33.40	17.01	18.37	17.73	22.16
3	50.00	79.00	0.384	2477.50	1.58	0.960	32.35	16.48	17.79	17.08	21.35

Civil-Tech Consultants & Engineers Bangalore

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported reported within 15days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.